

University of Maine at Presque Isle)
Aroostook County)
Presque Isle, Maine)
A-605-71-F-M)

**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emissions license minor revision application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

The University of Maine System in Presque Isle, Maine (UMPI) was issued air emission license A-605-71-E-N on December 6, 2001 permitting the operation of emission sources associated with their Presque Isle facility.

UMPI has eliminated the use of coal on the campus. As a result, two of the coal-fired boilers were removed from service and the remaining two were changed over to oil fired boilers. UMPI has also requested the addition of one back-up boiler (2.10 MMBtu/hr). The existing #2 fuel oil use limit will remain as it is in the current license.

B. Emission Equipment

UMPI is authorized to operate the following equipment in addition to the units listed in air emission license A-605-71-E-N:

Fuel Burning Equipment Changes

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Fuel Type, % sulfur</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Stack #</u>
<i>H4837</i>	<i>2.15</i>	<i>Coal</i>	<i>165 lb/hr</i>	<i>4SH</i>
<i>H5001</i>	<i>3.97</i>	<i>Coal</i>	<i>305 lb/hr</i>	<i>3FOL</i>
H2363	3.04	#2 fuel oil, 0.35%	26.0	6EM
H3497	4.15	#2 fuel oil, 0.35%	34.0	5WI
Back-up Boiler	2.10	#2 fuel oil, 0.35%	15.0	BUB1

Note: **Bold** indicates new or changes in equipment.
Italics indicate equipment no longer licensed.

C. Application Classification

The application for UMPI includes the installation of new equipment. However, the overall emissions from the facility remain the same. Therefore the license is considered to be a minor revision and has been processed as such.

II. **BEST PRACTICAL TREATMENT (BPT)**

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new equipment requires a demonstration that emissions are receiving Best Available Control Technology (BACT) as defined in Chapter 100 of the Air Regulations. BACT is a top down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Fuel Change

Boilers H2363 and H3497 now fire #2 fuel oil with a maximum sulfur content of 0.35% by weight. These boilers are still not subject to the requirements of EPA New Source Performance Standard (NSPS) 40 CFR Part 60, Subpart Dc for boilers between 10 and 100 MMBtu/hr.

BPT for the boilers is:

- Use of 0.35% sulfur #2 fuel oil.
- SO₂ emission rates are based on all of the sulfur in the fuel converting to SO₂ (mass balance).
- PM and PM₁₀ emission rates are based on MEDEP Chapter 103.
- NO_x, CO and VOC emission are based on AP-42 emission factors.
- Visible emissions from the stack serving Boilers H2363 and H3497 shall not exceed an opacity of 20 percent on a six (6) minute block average basis, for more than two (2) six (6) minute block averages in a 3-hour period.

C. New Back-up Boiler

The new Back-up Boiler has a heat input capacity of 2.1 MMBtu and fires #2 fuel oil with a maximum sulfur content of 0.35% by weight. This boiler is not subject to the requirements of EPA New Source Performance Standard (NSPS) 40 CFR Part 60, Subpart Dc for boilers between 10 and 100 MMBtu/hr.

BACT for the new Back-up Boiler is:

- Use of 0.35% sulfur #2 fuel oil.
- SO₂ emission rates are based on all of the sulfur in the fuel converting to SO₂ (mass balance).
- PM and PM₁₀ emission rates are based on BACT of 0.08 lb/MMBtu.
- NO_x, CO and VOC emission are based on AP-42 emission factors.
- Visible emissions from the stack serving the Back-up Boiler shall not exceed an opacity of 20 percent on a six (6) minute block average basis, for more than two (2) six (6) minute block averages in a 3-hour period.

C. Revised Annual Emissions

UMPI has the following emissions, based on:

- 450,000 gallons per year of #2 fuel oil with a maximum sulfur content not to exceed 0.35% by weight.
- 5,797 gallons per year of diesel fuel with a maximum sulfur content not to exceed 0.05% by weight.

(12 month rolling total)

Total Annual Emission for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>
PM	3.8
PM ₁₀	3.8
SO ₂	11.2
NO _x	9.5
CO	1.1
VOC	0.1

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III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a minor new source shall be determined on a case-by case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

ORDER

The Department hereby grants Air Emission License amendment A-605-71-F-M subject to the conditions found in Air Emission License A-605-71-E-N and in the following conditions:

The following shall replace Condition (16) of license A-605-71-E-N:

(16) Boilers

A. Emissions shall not exceed the following:

Boiler H2905, H2906, H6624, H2907, H2908 & H4705

<u>Pollutant</u>	<u>H2905 lb/hr</u>	<u>H2906 lb/hr</u>	<u>H6624 lb/hr</u>	<u>H2907 lb/hr</u>	<u>H2908 lb/hr</u>	<u>H4705 lb/hr</u>
PM	0.18	0.18	0.29	0.20	0.20	0.34
PM ₁₀	0.18	0.18	0.29	0.20	0.20	0.34
SO ₂	0.52	0.52	0.87	0.60	0.60	0.99
NO _x	0.44	0.44	0.73	0.51	0.51	0.84
CO	0.05	0.05	0.09	0.06	0.06	0.10
VOC	0.01	0.01	0.01	0.01	0.01	0.01

Boiler H6930, H3222, H4198& Back-up Boiler

<u>Pollutant</u>	<u>H6930 lb/hr</u>	<u>H3222 lb/hr</u>	<u>H4198 lb/hr</u>	<u>Back-up Boiler lb/hr</u>
PM	0.28	0.52	0.33	0.17
PM ₁₀	0.28	0.52	0.33	0.17
SO ₂	0.82	0.75	0.97	0.75
NO _x	0.69	0.63	0.82	0.63
CO	0.08	0.08	0.10	0.08
VOC	0.01	0.01	0.01	0.01

Boilers H2363 & H3497

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>H2363 lb/hr</u>	<u>H3497 lb/hr</u>
PM	0.12	0.36	0.50
PM ₁₀	n/a	0.36	0.50
SO ₂	n/a	1.08	1.47
NO _x	n/a	0.91	1.25
CO	n/a	0.11	0.15
VOC	n/a	0.01	0.01

- B. Visible emissions from each of the boiler stacks shall not exceed 20% opacity on a six (6) minute block average.

The following shall replace Condition (18) of license A-605-71-E-N:

- (18) UMPI shall not exceed the following fuel use limits, based on a 12 month rolling total:
- 450,000 gallons per year of #2 fuel oil, with a maximum sulfur content of 0.35% by weight
 - 5,797 gallons of diesel fuel, with a maximum sulfur content of 0.05% by weight

Compliance is based on fuel receipts from the supplier documenting the quantity delivered and the sulfur content.

The following are new conditions:

- (20) UMPI shall pay the annual air emission license fee within 30 days of **April 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

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(21) This amendment shall expire concurrently with Air Emission License A-605-71-E-N.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2003.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: April 11, 2003

Date of application acceptance: April 15, 2003

Date filed with the Board of Environmental Protection: _____

This Order prepared by Mark E. Roberts, Bureau of Air Quality